The Role of A Federal Advisory Committee: A Case Study of the American Statistical Association (ASA) Committee on Energy Statistics

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Introduction

In response to the energy crises of the mid and late 1970's[1], Congress created the Department of Energy (DOE) in 1977[2]. An integral part of DOE was the Energy Information Administration (EIA) which amalgamated the energy related statistical activities of over 50 different government agencies. EIA was given the mandate to create a clear, comprehensive and cohesive body of energy information[3]. The Energy Organization Act in 1977 gave the Administrator the responsibility to:

> . . .carry out a central, comprehensive and unified energy data and information program which will collect, evaluate, assemble, analyze and disseminate data and information which is relevant to energy resource reserves, energy production, demand and technology, and related economic and statistical information, or which is relevant to the adequacy of energy resources to meet demand in the near and longer term future for the nation's economic and social needs[4].

EIA has defined its role as providing, ". . . policy independent data, forecasts, and analyses to promote sound policy making, efficient markets and public understanding regarding energy and its interaction the economy and the environment."[5] To assist in that considerable task, EIA contracted with the American Statistical Association (ASA) to create a Committee on Energy Statistics (Committee). The Committee's Charter is renewed every two years and was last renewed in August, 2002[6].

The Charter provides the official designation of the Committee and states that it is a permanent committee of the American Statistical Association which reports to the Administrator of the EIA. Three specific activities were assigned the Committee:

- "Periodic reviews of elements of Energy Information Administration data collection and analysis programs and the provisions of recommendations;
- Advice on priorities of technical and methodological issues in the planning, operation, and review of Energy Information Administration statistical programs; and

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[1] Yergin, Daniel, *The Prize: The Epic Quest for Oil, Money, and Power* (New York: Simon and Schuster, 1992) 606-662 and 711-714.
[2] Department of Energy Organization Act, P.L. 95-91, 42 USC 7101 (1977)
[3] Kent, Calvin A. "An Analytical History of EIA", *Government Information Quarterly*, 10 (1993): 3
[4] Department of Energy Organization Act, Section 205(a)(2)
[5] EIA "What Would You Like to Know About Us?" http://www.eia.doe.gov/neic/aboutEIA/aboutus.htm accessed October 6, 2002.
[6] Caruso, Guy, memorandum for the Secretary DOE, through Robert Card Under Secretary, "Renewal of the Charter of the American Statistical Association Committee on Energy Statistics Under the Federal Advisory Committee Act", August 20, 2002. Charter attached.

- Advice on matters concerning improved energy modeling and forecasting tools, particularly regarding their functioning, relevancy, and results"[7].

The Charter provides for at least two meetings a year at 6-month intervals or at other times as the Committee wishes. Up to 15 members are to be appointed by the ASA President (this procedure has not always been followed) for 3 year terms and may be reappointed for an additional term. The chair and vice-chair are elected by the Committee for 3 year terms.

The Committee operates under the "Federal Advisory Committee Act" of 1972 as revised.[8] That Act recognizes that advisory committees, as well as other boards, commission and councils, are a, ". . . useful and beneficial means of furnishing expert advice, ideas and diverse opinions to the Federal Government"[9]. The Act proceeds to lay out the parameters within which those entities chartered under the Act must operate. The Administrator of General Services holds titular oversight of all these entities and has the right to promulgate rules and review activities[10].

In addition, each agency using a committee shall designate an "Advisory Committee Management Officer",[11] known informally as the "federal official", who has authority to adjourn the committee's activities at any time[12]. The Act makes it clear that committee actions are purely advisory[13]. The agency also must maintain the records of the committee, make required reports and provide for the financial support of the committee[14].

This paper is divided into two sections. The first analyzes the interactions between the Committee and EIA in each of the six overarching issues which have characterized EIA since its beginning. The information comes from the EIA files in the National Archives and those maintained at EIA. The agendas and the papers, reports and demonstrations which accompanied the agendas were reviewed. Between 1979 through 2001 there were 34 semiannual meetings of the Committee where 461 identifiable items were reviewed and discussed. All of those were considered in drafting this paper. No attempt is made to be complete in covering all the issues with which the Committee has dealt, but major concerns and representative work is discussed.

The second part of the paper concerns an evaluation of the Committee's effectiveness as viewed by its members and EIA officials. Questionnaires were sent to all former and current Committee members and EIA officials who had been connected to the Committee's work over its lifetime. Twenty usable responses were received and are

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[7] Ibid, Section 2
[8] Federal Advisory Committee Act, 5 USC Appendix 2 (1996)
[9] Ibid, Section 2
[10] Ibid Section 7
[11] Ibid, Section 8
[12] Ibid, Section 10
[13] Ibid, Section 9
[14] Ibid, Section 12

summarized. (See questionnaire results on page 21) The paper concludes with recommendations for enhancing the Committee's impact.

Issues Which Characterize EIA

Since its inception there has been six overarching issues with which EIA has characterized its work.[15] Those concern:

- Data Quality
- The Role of Modeling
- Confidentiality of Data
- Resources and Requirements
- EIA Independence
- Timeliness versus Accuracy

It is not surprising that the efforts of the Committee have been focused around these concerns. The degree of concern about these issues has fluctuated depending on the situation in world energy markets, concerns of the legislative and executive branches and the condition of EIA's budget. During its existence EIA has sought the advice and counsel of the Committee on all of these.

Table I summarizes the work of the Committee in each of the six areas. The Table was constructed by reviewing the 461 papers, demonstrations, workshops, roundtables and reports that were on the agendas of the Committee at its biannual meetings beginning in 1979 through 2001. A degree of subjectivity is present in the classification system as some of the agenda items overlapped more than one of the six topics. In these cases the item was classified according to its primary content and the principle issue which the agenda item addressed.

INSERT TABLE I

The Table is divided into three distinct periods corresponding to presidential terms. The first few years (1979-81) were the Carter years in which the nation was coping with the aftermath of the Arab Oil embargo of the middle seventies and the natural gas shortages of the latter part of that decade. The second period contains the terms of the two Republican Presidents Reagan (1981-1989) and Bush (1989-1993). While Bush did not share Reagan's desire to eliminate the Energy Department, he was a strong advocate of a market based energy policy and moved to deregulate both natural gas and electric markets. His administration saw the passage of strong clean air legislation and the conduct of the Gulf War as well. From 1993-2001Clinton was President and the primary

[15] Kent, pp. 3-7

Table I
Coverage of Topics
ASA Committee on Government Statistics

1979-2001

Topic	1979-1981		1982-1992		1993-2001		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Data Quality	24	39%	84	43%	86	42%	194	42%
Role of Modeling/Forecasting	12	20%	46	24%	48	23%	106	23%
Confidentiality of Data	2	3%	6	3%	6	3%	14	3%
Resources and Requirements	6	10%	21	11%	32	16%	59	13%
Independence of EIA	2	3%	2	1%	2	1%	6	1%
Timeliness vs. Accuracy	9	15%	26	13%	20	10%	55	12%
Other	6	10%	10	5%	11	5%	27	6%
Total	61	100%	195	100%	205	100%	461	100%

energy issues dealt with the results of deregulation and to emphasize environmental concerns related to global warming and air pollution. Not surprising the work of EIA and the Committee reflected these presidential priorities.

Data Quality

Quality data is the first essential for any meaningful statistical program. Considering the number of organizations being blended when EIA was formed, producing a comprehensive and consistent data set has been one of the EIA's major concerns. In his 1979 testimony before Congress, Administrator Moses pledged that data quality would be his main emphasis as he sought to integrate the 230 different data systems from EIA's predecessor agencies[16]. His focus was to be on oil and gas reserves, financial reporting, energy consumption and fuels.

As Table I shows, data quality has been the principle preoccupation of the Committee since its first meeting. Across all time periods an average of 42 percent of the Committee's work concerned some aspect of data quality. This emphasis is surprisingly consistent no matter who was in the White House. Internally there was always tension in EIA over the amount of its resources that should be devoted to data quality.

Within the broad category of data quality the activity of the Committee has been varied and wide-ranging. Major problem areas have included:

- Collection of data (including timeliness of respondents) (61 agenda items)
- Validity of data (including data audits, documentation and performance standards) (31 agenda items)
- Timeliness of dissemination (19 agenda items)
- Sampling techniques (including survey design) (38 agenda items)
- Missing or incomplete data (including estimation techniques) (37 agenda items)
- Standardization of data definitions (9 agenda items)

Data problems plagued two of EIA's most important publication series, the fuel reports and the reports on energy consumption[17]. In addition data had to be available for purpose of forecasting and in model development[18].

A prime example of these problems is the quadrennial Residential Energy Consumption Survey (RECS). Beginning in 1978 this survey has provided data on household energy use. The data is presented by type of household, by types of appliances, by geographic

[16] Lincoln Moses "Statement", Hearings on the Energy Information Administration FY 1979 Budget Request, Subcommittee on Energy Conservation and Regulation, Senate Committee on Energy and Natural Resources, 95th Cong. 2nd Sess. (1978)

[17] French, Dwight and Leach, Nancy "Methodological Issues in the Energy Consumption Surveys", ASA Committee on Energy Statistics April 13, 2000.

[18] Sitzer, Scott and Andersen, Arthur "Data Requirements for NEMS", ASA Committee on Energy Statistics, October 27, 1994.

region and by fuel type[19]. The most recently released RECS was based on 5,000 completed personal interviews from the over 100 million households in the nation. This basic sample was designed to ". . . represent the total population of U.S. households with specific levels of precision for each of the nine geographically defined Census Regions"[20]. A supplemental sample of 800 lower income households was also undertaken. A further supplemental survey of rental agents was included. Energy suppliers were asked to furnish data concerning actual energy use by fuel type from consumer billing records for the households included in the sample.

Designing a sample with a sufficient level of precision is a major undertaking. For the entire period of the RECS the Committee has been heavily involved in providing suggestions for sampling techniques. The extent of Committee involvement can be seen from the following summary of its activities pertaining to RECS. Early on in 1980 the Committee was consulted about the use of "subjective data" in the RECS[21]. RECS was again on the agenda in 1982[22], 1983[23] and 1985[24].

In 1992 a presentation was provided on EIA's use of video tape based training of RECS interviewers[25] and the use of RECS data in NEMS[26]. The relationship between NEMS and RECS data was again on the agenda in 1996[27] along with a discussion and demonstration of EIA's Computer Assisted Personal Interview system[28] which was to be used for the first time in the 1997 RECS. That discussion continued into 1997[29]. Faced with declining monetary support for RECS, the Committee considered ways to cut costs

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[19] EIA, *A Look at Residential Energy Consumption in 1977*, (1999), DOE/EIA-6032 (97) Http://tonto.eia.doe.gov/FTPROOT/consumption/063297.pdf, accessed September 22, 2002.
[20] *Ibid*, 227 for a full discussion of the sampling techniques used see Appendix A of the report.
[21] Walton, Howard "Collection of Subjective Data in the National Residential Energy Consumption Survey", ASA Committee on Energy Statistics, May 16, 1980.
[22] Carlson, Lynda "Uses of Residential Energy Consumption System (RECS) Data-Particularly the Transportation Panel", ASA Committee on Energy Statistics, May 13, 1982.
[23] Latta, Robert "Approaches to Deriving End-Use Consumption Estimates in the Residential Sector from RECS Annual Data", ASA Committee on Energy Statistics, April 28, 1983.
[24] "Residential Energy Consumption Survey (RECS): From a 2-year to a 3-Year Cycle" (no author). ASA Committee on Energy Statistics, October 1985.
[25] Leach, Nancy "An Assessment of the Use of Videotape Interviewer Training for the Residential Energy Consumption Survey", ASA Committee on Energy Statistics, October 25, 1992.
[26] Flynn, Ed National Energy Modeling System (NEMS) Building Sector: Residential and Commercial", ASA Committee on Energy Statistics, November 19, 1992.
[27] Cymbalsky, John "Residential and Commercial Demand Models in NEMS", ASA Committee on Energy Statistics,
[28] Laurence, Michael "The 1997 Residential Energy Consumption Survey: A Demo of the computer-Assisted Personal Interview Version", ASA Committee on Energy Statistics, November 8, 1996
[29] Laurence, Michael "Update on 1997 Residential Energy, Consumption Survey: Computer-Assisted Personal Interview Version", ASA Committee on Energy Statistics, April 10, 1997, [Long, Gary and Maloney, Mike "EIA's International Data Program", ASA Committee on Energy Statistics November 2, 1989, Kirkendall, Nancy and Doman, Linda "Sampling Issues: Best Use of Available Data" October 24, 1991. Kirkendall, Nancy "Follow-up on Sampling: Electric Power and Petroleum Supply" ASA Committee on Energy Statistics, March 20, 1992].

through improved survey technologies[30]. The topic of RECS survey design was part of another session in 2000[31].

Similar Committee involvement occurred with the Commercial Building Energy Consumption Survey (CBECS) which is, ". . . designed to provide basic statistical information on energy consumption and expenditures in U.S. commercial buildings and data on energy-related characteristics of these buildings"[32]. An even more complicated survey is required for the Manufacturing Energy Consumption Survey (MECS) which estimates energy consumption by type of fuel and by industrial sector in the U.S. economy[33]. While not detailed in this paper, both of these quadrennial surveys were scrutinized by the Committee in 22 presentations from 1979-2001.

Energy end use was not the only concern of EIA or of the Committee. Fuels surveys for oil, natural gas, coal, nuclear, electric and renewables are all conducted by EIA. Some are weekly while others are either monthly or quarterly with annual summaries being produced for each. The earliest problems were bringing consistency to the data series from EIA forbearers[34]. Over the years were the problems of non-response rates, imputation of missing data and the accuracy of data being supplied were frequently addressed by the Committee[35]. The Committee also has been concerned about how estimates were being made from the sampled data[36].

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[30] French, Dwight "Addressing Declining Budgets with Improved Survey Technologies", April 24, 1998 and "Alternatives to Reducing the Cost of RECS: A Response to ASA Committee Suggestions from the Spring 1998 Meeting", ASA Committee on Energy Statistics, November 20, 1998.

[31] Latta, Robert "Survey Design for Residential and Commercial Consumption Surveys" ASA Committee on Energy Statistics, November 2, 2000.

[32] EIA, *A Look at Commercial Buildings in 1995: Characteristics, Energy Consumption, and Energy Expenditures*, October 1998, DOE/EIA-0625 (95) 334. For details on sampling methodology see Appendix A.

[33] EIA, *Manufacturing Consumption of Energy 1994*, December 1997, DOE/EIA-0512 (94). For details on sampling methodology see Appendix B.

[34] The September 1979 meeting had nine separate presentations related to this problem.

[35] See Taylor, David "An Evaluation of the Quality of EIA Data-A Progress Report", ASA Committee on Energy Statistics, May 29, 1981, Freedman, Stan "Current Efforts to Integrate and Organize EIA Data and Metadata", ASA Committee on Energy Statistics, October 23, 1981, Kindel, Carrol "The EIA Standards Program", ASA Committee on Energy Statistics, May 13, 1982, Miller, Renee "Findings and Issues from the 1982 State of the Data Report", ASA Committee on Energy Statistics, April 29, 1983, Mangen, Larry "The Status of Exploration Statistics", ASA Committee on Energy Statistics, April 25, 1985, Pettis, Larry "Data Quality and Reliability Issues" ASA Committee on Energy Statistics, November 4, 1999, Hakes, Jay Kirkendall, Nancy, Kydes, Andy "Panel Discussion: Challenges in Measuring Data Quality", ASA Committee on Energy Statistics April 24, 2000.

[36] For example see: Kirkendall, Nancy and Doman, Linda "Sampling Issues: Best Use of Available Data" October 24, 1991. Kirkendall Nancy, "Follow-up on Sampling: Electric Power and Petroleum Supply" ASA Committee on Energy Statistics, November 4, 1992, Robinson, Bill "Constructing a Price Index when Reliable Data are Sparse and Type of Data Available is Changing", ASA Committee on Energy Statistics, April 20, 1995, Paula Weir, "The Use of A Variant of Poisson Sampling to Reduce Sample Size in a Multiple Product Price Survey, ASA Committee on Energy Statistics, April 10, 1997, Knaub, James "Implementing a New Sampling Technique for Monthly Electric Power Data Collections" ASA Committee on Energy Statistics, November 2, 2000.

For its entire life the Committee heard from EIA on the problems of data definitions. Despite significant progress, major problems exist and the Committee has provided input on possible solutions [37]. Initiation of the Common (Data) Collection and Processing System (CCAPS) by EIA has made standardization of data definitions even more pressing[38].

Data related problems have been complicated by EIA using more data collected from international sources[39]. Data collection from deregulated natural gas[40] and restructured electricity[41] have created a host of additional problems. In the days of regulation most data could be supplied by firms as part of their reporting process. As these industries have become deregulated, the traditional sources of data from regulated suppliers have either disappeared or become less comprehensive. With help from the Committee EIA has become very creative in obtaining the needed data.

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[37] Kirkendall, Nancy "End-Use Sector Definitions in EIA Data", ASA Committee on Energy Statistics, April 22, 1994, Miller, Renee "Standardizing Data Definitions and Calculating Common Response Rates," ASA Committee on Energy Statistics, April 23, 1998, Miller, Renee "Common Data Definitions: Is there an Option 2.5?", ASA Committee on Energy Statistics, April 29, 1999, Miller, Renee "Common Data Definitions: Steady Progress", ASA Committee on Energy Statistics, November 4, 1999.

[38] Peabody, John and Heath, Chuck "Common Data Collection and Processing System (CCAPS) and Anticipated Challenges", ASA Committee on Energy Statistics, April 29, 1999.

[39] Long, Gary "EIA's International Data Program", ASA Committee on Energy Statistics, November 2, 1989.

[40] Lique, Diane "EIA Activities in Preparation for the Decontrol of Petroleum Prices", ASA Committee on Energy Statistics, January 30, 1981, "Update: Supply and disposition of Natural Gas Distributors" ASA Committee on Energy Statistics, April 25, 1985, Herbert, John "Use of Models in Evaluating Natural Gas Data", ASA Committee on Energy Statistics, April 10, 1986, Hale, Doug "Experimental Economics to Evaluate Effect of Natural Gas Deregulation", ASA Committee on Energy Statistics, October 27, 1988, Kass, Roy "Monthly Estimation of Volumes and Prices of Natural Gas Delivered to Industrial End Users," ASA Committee on Energy Statistics, October 28, 1988, Lique, Diane "The National Petroleum Council Study on Natural Gas" ASA Committee on Energy Statistics, April 29, 1993, Robinson, Bill "Effects of Structural Changes in Industry: Natural Gas Issues", ASA Committee on Energy Statistics, April 20, 1995, Kass, Roy "An Update on Issues Pertaining to the Restructuring of the Natural Gas Industry, ASA Committee on Energy Statistics, April 26, 1996, Kass, Roy and Natof, Margo "Update on the Natural Gas Data Collection on Industrial Prices", ASA Committee on Energy Statistics, November 8, 1996, Kass, Roy; Harris, Sue; Casselberry, Jay; Martin, Antoinette "Efforts Within EIA's Office of Oil and Gas to Minimize Impacts of Deregulation on Respondent Cooperation" ASA Committee on Energy Statistics, April 24, 1998, Heinkel, Joan and Freedman, Stan "EIA Responses to Market Changes in Natural Gas", ASA Committee on Energy Statistics, April 14, 2000, Freedman, Stan and Campbell, Beth, "How to Implement Significant Survey Redesigns: Form EIA-179",ASA Committee on Energy Statistics, October 25, 2001.

[41] Hutzler, Mary "Capturing Nonutility Generation", ASA Committee on Energy Statistics, April 6, 1989, Kimbrough, Mary "EIA's Initial Nonutility Survey: Experience Gained" ASA Committee on Energy Statistics, October 24, 1991, Balthasar, Noel "Effects of Structural Changes in Industry: Electricity Issues", ASA Committee on Energy Statistics, April 20, 1995, Knaub, Jim "Collecting Monthly Data from Utilities and Nonutilities" ASA Committee on Energy Statistics, November 6, 1995, Makens, John "Data Collection for a Changing Electric Power Industry" and Hale, Doug "Electricity Data Needs: An Economic Perspective", ASA Committee on Energy Statistics, November 7, 1996, Schnapp, Robert "Electricity Today: A Briefing", ASA Committee on Energy Statistics, November 13, 1997, O'Brien, Betsy and Colligan, John "Electricity Industry Restructuring: A Status Report of CNEAF Progress with Data Requirements, Confidentiality and Next Steps", ASA Committee on Energy Statistics November 16, 1998, Schnapp, Robert "Redesign of Electricity Data Collections: 2002", ASA Committee on Energy Statistics, April 13, 2000, Fennell, Dean "Electricity 2002: New Data Forms and New Confidentiality Policy", ASA Committee on Energy Statistics, April 19 2001.

The Role of Modeling

Among the federal government's statistical agencies, EIA was the first to have a legislative mandate to forecast developments in energy markets. In addition, both Congress and the presidents wanted to know the expected outcomes of policy decisions which were being proposed. Despite the admonition attributed to EIA's first Administrator, Lincoln Moses, "There are no facts about the future", EIA has and continues to forecast both short and long term markets for all sources of energy as well as energy end use. The use of models to simulate the outcomes of policy initiatives was an early responsibility but expanded significantly during the Bush Administration.

Throughout its career the Committee has devoted more of its efforts to modeling than any other topic except data quality. Over the years, 23 percent of the agenda items related primarily to modeling. As was the case with data quality there is notable consistency of effort over all the time periods, although attention was less during the Carter era.

EIA's modeling efforts have changed dramatically over its life. Its early concerns were trying to make consistent the various forecasting models from the agencies it inherited. Since all used different methodologies, EIA had to try to reconcile these to produce a single useable forecast for both short term and longer. It was extremely important that the individual model results be consistent with each other and with the macro model. This was not always the case as the Committee discussions indicate.

The first Committee meeting in May of 1979 held an extended discussion on the adequacy of integration of EIA's models.[42] Concern with model integration continued into the 1980's[43] when EIA began a major redesign of its models for long term forecasting. By the mid 1980's the Intermediate Future Forecasting System (IFFS) had been developed and the Committee performed a major evaluation of its effectiveness[44].

For the rest of the decade the Committee received updates on modeling results, but interest in modeling accelerated with insistence from the Administration in July 1989 to build a more accurate and useful forecasting system. This system, called the National Energy Modeling System (NEMS), was to be capable for use in policy analysis as well as forecasting. Issues relating to development of the model were immediately brought to the

[42] "Review of Energy Applied Analysis Models and Forecasting Tools and Procedures to Give Useful Indication of the Degree of Uncertainty Inherent in EIA Forecasts and Analyses", (no author)
[43] Zalking, Julie "Proposed New Structure for EIA's Annual Forecast Volume", ASA Committee on Energy Statistics, October 22, 1981.
[44] Pearson,John "Integrated Forecasting Using the Intermediate Future Forecasting System (IFFS)", Moody, Carlisle F. "Linking IFFS with Macroeconomic Forecasts", Shaw, Susan "Linking with the Oil and Gas Modeling Systems", Schnapp, Robert "Implementation of a Coal Supply Model in IFFS", Hale, Douglas "IFFS Sensitivity Analysis", ASA Committee on Energy Statistics, October 27, 1983.

Committee[45] and have been an almost constant agenda item since that time. The Committee's entire March, 1990 meeting was devoted to the development of NEMS[46].

At the request of the DOE, the National Research Council (NRC) prepared an evaluation of the architecture and structure of the NEMS[47] and issued a final report[48]calling for NEMS to be used for policy analysis, the Administrator to be responsible for NEMS, a user committee be established, particular attention be paid to uncertainty and NEMS be modular, transparent and useful in making rapid responses to policy issues. The Committee has preformed the function of being the "user group". Between 1989 and 1996 issues related to NEMS appeared on the Committee's agenda 26 times, more than any other single topic.

Recent Committee attention has shifted to international modeling. The spring 1999 Committee meeting conducted a break out session on EIA's plans[49]. The following spring a full presentation of EIA's new "System for Analysis of Global Energy (SAGE)" was given the Committee[50] with a follow up on the problems of this system at the Committee's fall meeting[51]. Both the spring[52] and fall[53] meetings had further discussions. The model is now being used for the production of EIA's *International Energy Outlook.*

Resources and Responsibilities

EIA has faced the dilemma of increasing responsibilities with diminishing resources. As Table II indicates EIA's budget has not expanded consistent with its increased workload. EIA has responsibilities to both the Legislative and Executive branches. Technically the Administrator determines EIA's research and publication agenda. But in fact legislative mandates, administration priorities, Congressional requests and DOE demands have placed pressure on EIA to collect more data and do more analysis in an even more timely fashion. Further EIA personnel are always being drafted for involvement in studies being completed by other federal agencies.

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[45] Kilgore, W. Calvin "The National Energy Modeling System" ASA Committee on Energy Statistics, November 2, 1989.
[46] Lique, Diane "Oil and Gas", Hutzler, Mary "Electricity and Nuclear", Schnapp, Robert "Coal", Walton, Howard "Renewables", Carlson, Lynda and Pearson, John "Consumption and Conservation", Anderson, Arthur "NEMS Development Issues", Forester , J.W. "Technical Aspects of Long-Term Forecasting", ASA Committee on Energy Statistics, March 29-30, 1990
[47] National Research Council, Committee on the National Energy Modeling System, *Development of a National Energy Modeling System,* First Advisory Report, 1991
[48] National Research Council, *The National Energy Modeling System,* 1992.
[49] Cohen, Barry "International Modeling", ASA Committee on Energy Statistics, April 29, 1999.
[50] Hutzler, Mary "System for Analysis of Global Energy (SAGE) Markets", ASA Committee on Energy Statistics, April 13, 2000.
[51] Hale, Douglas Kydes, Andy and DeMouy, Louis "Some Challenges in Long-Term International Energy Modeling", ASA Committee on Energy Statistics, November 2, 2000.
[52] Hutzler, Mary "Progress on the International (MARKEL) Model Development" ASA Committee on Energy Statistics, April 19, 2001
[53] Cohen, Barry "International (MARKEL) Status Report on EIA's System for Analyzing Global Energy", ASA Committee on Energy Statistics, October 26, 2001.

INSERT TABLE II WITH GRAPHS I AND II

Table II relates both the levels of employment and the amount appropriated to EIA during its lifetime. Even though the nominal budget has increased from $49 million to $90, in real terms the budget has shrunk from $117.2 to $90 million in 2002 dollars. As noted in Table II EIA's real budget rose rapidly in the early years and then went into decline. EIA's resources suffered most during the Reagan Administration's drive to have DOE abolished. During the first Bush administration, the budget experienced a small revival, to be followed by a decline during most of the Clinton terms. The last few years have seen a small rebound. Employment has followed a similar pattern. From a high of 769 the number of FTE's has steadily declined except for a small up-tick during the 1990's. For the last few years it has stabilized at 375.

EIA's ability to cope with increased demands in a shrinking resource environment has occupied between ten and sixteen percent of the Committee's agenda (Table I). The competition between EIA's legislatively mandated studies and data collections with the additional workload from requests for special reports was an early problem[54]. For a number of years the Professional Audit Review Team (PART) criticized EIA for its priotizing of workload[55] feeling that accuracy of data was being sacrificed to other concerns. These concerns came to the Committee[56] for discussion. The Committee also held sessions relating to the problems of data collection, analysis and forecasting pertaining to the deregulation of natural gas and restructuring of the electric industry as noted above.

In addition energy related emissions were added to EIA's agenda due to the Clean Air Act Amendments (CAAA) of 1990 and the Energy Policy Act (EPACT) of 1992[57]. These amendments forced EIA to modify virtually all of its petroleum data collection forms to capture production and distribution of reformulated gasolines and desulfurized fuels. But the greatest challenges concerned the estimation of emissions of greenhouse gases and The Voluntary Reporting of Greenhouse Gases Program under EPACT. Under this provision U.S. companies and agencies report the voluntary measures they have taken to reduce or sequester greenhouse gases. EIA issues annual reports on these activities[58].

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[54] Dwyer, Bruceop cit.

[55] Professional Audit Review Team, *Report to President and the Congress, Activities of the energy Information Administration*, (1979), (1980), (1982), (1984),(1986), (1988)

[56] Boland, Kevin "PART Objectives and Methodologies", ASA Committee on Energy Statistics, April 25, 1985. (PART was abolished in 1996).

[57] Energy Policy Act of 1992, Title VI, Section 1605(a)(b).

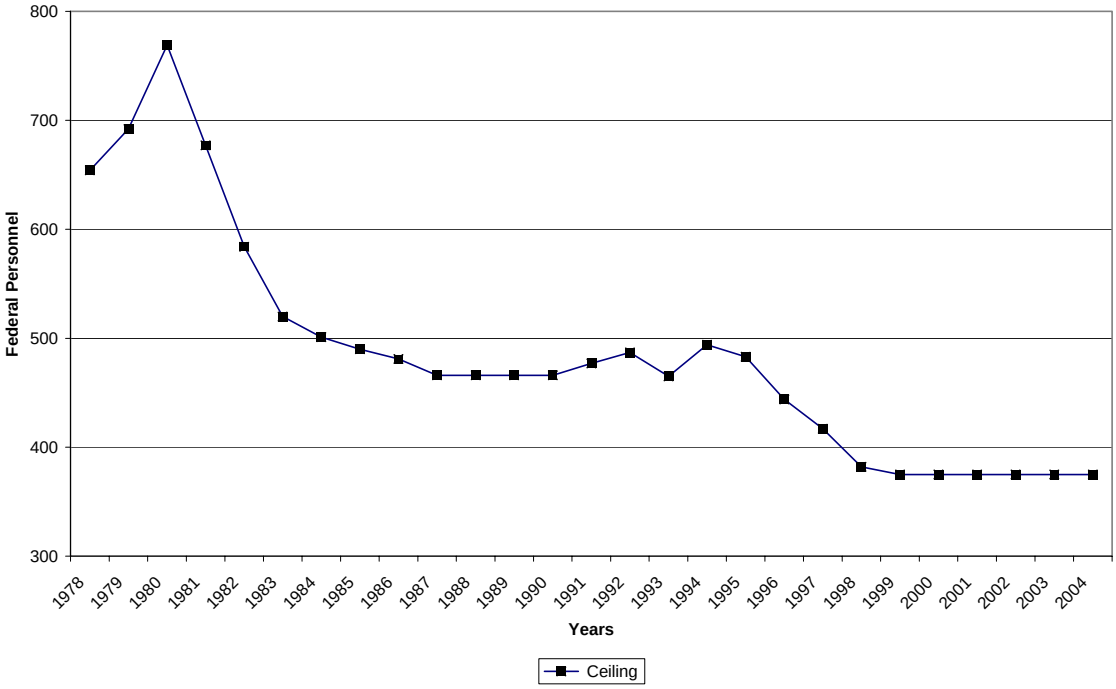
[58] For the latest editions see: EIA, *Voluntary Reporting of Greenhouse Gases 2000*, (February 14, 2002) http;//www.eia.doe.gov/oiaf/1605.html; *Emissions of Greenhouse Gases in the U.S. 2000*, (November 9, 2001) http://www.eia.doe.gov/oiaf/1605. html.

Table II
Personnel & Appropriations Summary
Energy Information Administration
FY 1978 – 2004

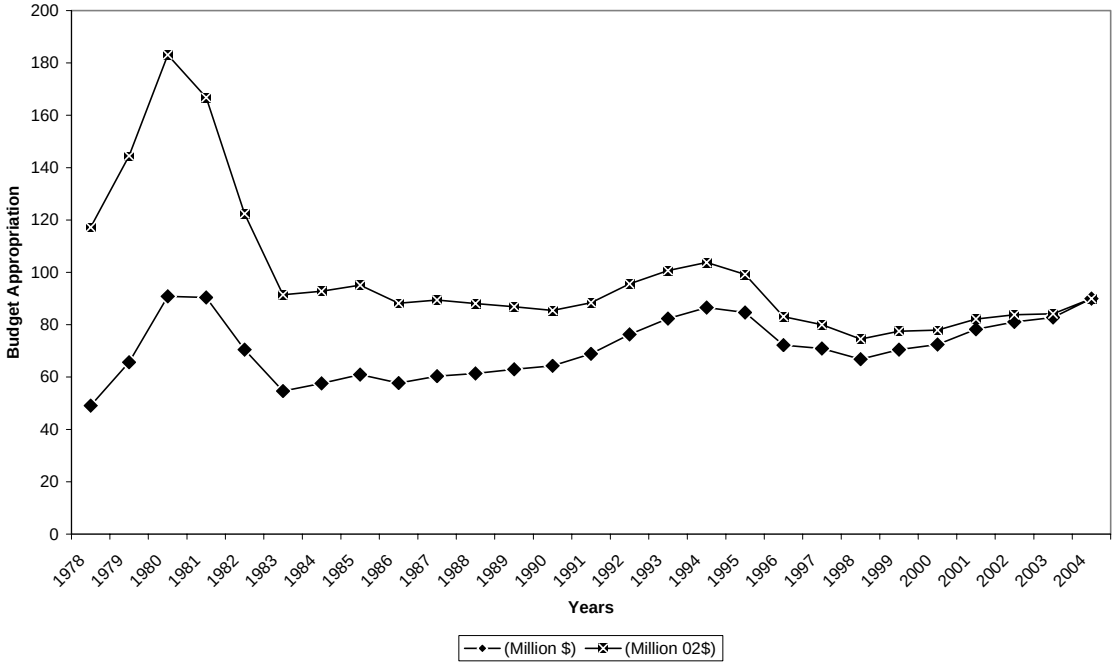
	Federal Personnel			
Fiscal Year	**Ceiling**	**Avg. Level**	**Budget Appropriation**	
	(FTE)	**(FTE)**	**(million $)**	**(million 02$)**
1978	654	-	49.1	117.2
1979	692	-	65.6	144.5
1980	769	-	90.8	183.1
1981	677	-	90.4	166.8
1982	584	-	70.5	122.4
1983	520	480	54.7	91.4
1984	501	505	57.6	92.8
1985	490	480	60.9	95.1
1986	481	457	57.7	88.2
1987	466	452	60.3	89.4
1988	466	460	61.4	88.1
1989	466	464	62.9	86.9
1990	466	462	64.3	85.5
1991	477	462	68.9	88.4
1992	487	463	76.3	95.6
1993	465	456	82.3	100.7
1994	494	455	86.6	103.8
1995	483	466	84.6	99.2
1996	444	444	72.2	83.1
1997	417	413	70.9	80.0
1998	382	376	66.8	74.5
1999	375	375	70.5	77.5
2000	375	375	72.4	77.9
2001	375	375	78.2	82.2
2002	375	375	81.1	83.8
2003	375	375	82.8	84.2
2004	375	375	90.0	90.0

Notes: Personnel: from 78 to 82, data are in FTP (full-time permanent); from '83 forward, data are in FTE (full-time equivalent). Actual FTE data excludes FTE for Nuclear Waste Disposal Fund.
FY01 to FY04 does not include the following Retirement & Annuitant Health Care Costs: FY01 = $ 2,646,000.
FY02 = $2,7000,000; FY03 = $2,690,000; FY04 = $2,772,000.
Sources:
Budget: DOE budget appropriation
GDP price deflator: EIA Short-Term Energy Outlook 2nd

GRAPH I
Personnel Summary



GRAPH II
Budget Appropriations



The Committee was involved from the start in assisting EIA to align its resources to meet this increased responsibility and evaluating EIA's methods and products[59]. An entire half day was devoted to EIA's responsibilities regarding energy emissions at the spring 1998 meeting[60]. Committee interaction has continued[61] as EIA has considered ways to increase the quality of its estimates.

It is important that this major new responsibility for EIA was legislated without an increase in resources. Basically, EIA has been forced to use internal reallocation to meet these new and complex demands[62]. Similar comments are appropriate for renewables, non-utility generation and new technologies.

EIA has consistently used information technology as a way of increasing quality and reducing costs. As early as 1984, the Committee began a continuing review of EIA products, procedures and publications[63] to assist EIA in meeting their budgetary challenge through expanded use of technology. In other cases the Committee has used and field tested the technologies being developed[64]. The result has been a highly sophisticated information system which EIA describes as "Infocentric"[65]. The result has been more information collected and disseminated "on-line" with decreased costs and increased timeliness.

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[59] Prete, Larry "Measuring SO2 Emissions" ASA Committee on Energy Statistics, March 14, 1991. Anderson, Arthur "Greenhouse Gas Emissions Reductions" ASA Committee on Energy Statistics, April 10, 1993, Anderson, Arthur and Rypinski, Arthur "Emissions of Greenhouse Gases: What's New for the Second Report", ASA Committee on Energy Statistics October 28, 1994,

[60] Anderson, Arthur and Rypinski, Arthur "Greenhouse Gas Emissions", Kydes, Andy and Earley, Ron "Analysis of the Carbon Stabilization Cases in EIA's Service Report", Beamon, Alan "SO2 and NO2 and Renewable Cases", Hakes, Jay "Future Analyses Related to the Kyoto Agreement", ASA Committee on Energy Statistics, April 23, 1998.

[61] Lindstrom, Perry "Measuring Uncertainty in Energy CO2 Emissions: Evaluating a Monte Carlo Approach", ASA Committee on Energy Statistics, April 14, 2000 and April 19, 2001

[62] Hakes, Jay "Centralization and Standardization without Reorganization", ASA Committee on Energy Statistics, November 4, 1999.

[63] Weiner, John "Introduction of Information Technology into EIA," Sacquety, Roger "In the Collection Process", Whited, Diane "In the Report Process", Ferguson, James "In the Dissemination Process", Moerschel, Neal "In Document Control", ASA Committee on Energy Statistics, October 18, 1984, Moore, Ric "Information Resource Management," ASA Committee on Energy Statistics, April 7, 1989, Balthasar, Neal "Results of the Process Improvement Team on Survey Costs", Heath, Charles "Business Re-engineering", Kirkendall, Nancy "performance Measurement", Rodekohr, Mark and Frederick, Howard "Documentation of Data on the Internet", ASA Committee on Energy Statistics, November 8, 1995, French, Dwight "Addressing Declining Budgets with Improved Survey Technologies" and Kass, Roy et. al. "Efforts Within EIA's Office of Oil and Gas to Minimize Impacts of Deregulation on Respondent Cooperation", ASA Committee on Energy Statistics, April 24, 1998, Underwood, Bill "New Ways to Process, Store and Make EIA Data Accessible", ASA Committee on Energy Statistics, November 2, 2000.

[64] Ware-Martin, Antoinette "Interactive Presentation: Cognitive Interviews on EIA's Web Site", ASA Committee on Energy Statistics, April 30, 1999, Pearson, John and Mount, Tim " Future Directions in Electronic Data Dissemination", with demonstrations by Weigel, Henry; Gowland, Lamar and Kass, Roy, ASA Committee on Energy Statistics, October 27, 1994, Blessing , Colleen, et. al., "Interactive Session: Cognitive Testing of Potential EIA Graphic Redesigns", ASA Committee on Energy Statistics, November 3, 2000 and April 20, 2001.

[65] Pearson, John and Weiner, John "EIA's 'Infocentric' Orientation", ASA Committee on Energy Statistics, November 4, 1999.

In November of 1999 EIA shared with the Committee a prioritization of its efforts to meet the new initiatives, maintain quality and appropriately disseminate its efforts[66]. Highest priority was:

- Data Accuracy
- Comprehensive, integrated data series across fuels and end-uses
- Cogent, impartial analyses of important topics of broad interest
- Custom information for policy makers
- Maximum information for the general public on the web
- Short and mid-term models for energy analysis

Lower priority items were:

- Preservation of traditional publication formats and associate hard copy products
- New custom information for private sector customers
- New areas of data collection

The Committee accepted that prioritization as appropriate. It appears that EIA has followed that listing through the present time.

Confidentially of Data

Since its inception EIA has been in conflict with other federal agencies over the availability of the data in its custody. At the outset EIA's data was used for both statistical and regulatory purposes. EIA felt this dual use of data had two negative effects[67]. First, it made respondents less willing to comply with EIA's surveys. Proprietary information given to EIA could then be used against a firm in any legal proceedings. Further, if this information was used for other than statistical purposes, competitive advantages could be given if it were to be made public in a regulatory proceeding.

Second, if EIA could not assure confidentiality to its respondents, then the ability of EIA to interact with other federal statistical agencies which had such assurances, would be and was severely limited. Of principal concern was work with the Bureau of the Census which has collected some of EIA's consumption data under the confidentiality shield they possess. If that data were to become public or used for regulatory purposes, it would violate their confidentiality. For those reasons EIA sought to draw a clear line between data collected for statistical and that collected for regulatory purposes.

At times of rising gasoline, fuel oil or electric prices the Department of Justice (DOJ) has sought EIA's information to assist in determining if prosecution on grounds of price fixing was warranted. The DOJ determined that EIA must provide statistical information

[66] Kilgore, Calvin and Weir, Paula, "Work Priorities, Including Standard Products and Technology Issues", ASA Committee on Energy Statistics, November 4, 1999.
[67] Kent, op. cit., p.4.

in its possession to other Federal departments, agencies and officials for their use[68]. EIA has sought to avoid this restriction by having contractors acquire the information and transmitting it to EIA without identifiers.

Confidentially of EIA's data was frequently addressed by the Administrators in their remarks at the beginning of many Committee meeting. Referring to Table I the Committee has devoted around 3 percent of its agenda items specifically to this topic. The second meeting of the Committee conducted a session that discussed with the Committee the difficulties EIA was having in acquiring data because it could not assure confidentiality to respondents[69]. The problem continued into the 1980's without resolution[70].

At the spring 1996 meeting a representative of the Office of Management and the Budget (OMB), presented his agencies views on alternative ways that EIA could protect its data.[71] OMB had proposed legislation which would provide a "shield of confidentiality" to data collected by all federal statistical agencies[72]. No action was taken by Congress.

Four years latter the issue was again before the Committee with a panel discussion by the Administrator and his staff about pending legislation, "The Statistical Efficiency Act of 1999" which would increase EIA's ability to shield its information.[73] A former administrator criticized the proposed legislation as being insufficient to meet EIA's needs particularly in the new era of deregulation.[74] While not providing full confidentiality the legislation would have allowed data sharing among federal agencies. That legislation was not acted upon by Congress.

Currently there is before the Congress the "Confidential Information Protection and Statistical Efficiency Act of 2002". Under that Act EIA would be, ". . . accorded the ability to protect data collected for exclusively statistical purposes under a pledge of confidentiality"[75]. The legislation would require EIA to determine which of its collections were exclusively for statistical purposes.

The Independence of EIA

When EIA was created, it was the intention of Congress to provide it and the executive branch with untainted information as free from political agenda as possible. As the

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[68] Memorandum for Rill, James F. to Luttig, Michael (October 4, 1990) discussing request for legal opinion: Section 12 Federal Energy Administration Act.
[69] Lincoln Moses, "EIA Disclosure Policies" ASA Committee on Energy Statistics, September 21, 1979.
[70] Weigle, Kathy, "Update on Confidentiality Issues", ASA Committee on Energy Statistics, Oct 19, 1984.
[71] Coffey, Jerry "Update on Confidentiality" ASA Committee on Energy Statistics, April 25, 1996
[72] Rivlin, Alice M., Letter to Gore, Albert, President of the Senate, Transmitting the proposed "Statistical Confidentiality Act", April 17, 1996. (Legislation attached)
[73] Hakes, Jay; Casselberry, Jay and Latta, Robert "Panel Discussion on Confidentiality Legislation". ASA Committee on Energy Statistics, April 13, 2000.
[74] Kent, Calvin A. "Discussion of Confidentiality Legislation", ASA Committee on Energy Statistics, April 13, 2000.
[75] Casselberry, Jay E-mail to Kent, Calvin , October 9, 2002.

Congressional Research Service commented, "Congress sought to centralize responsibility for the collection of all important energy information, give the agency independence from the policy process so that it would not be compromised (as its immediate predecessor agency, the Federal Energy Administration, was thought to have been). . ."[76] The ability to remain independent has been realized, but not without concern.

EIA serves two masters, Congress and the Administration, providing data and analysis to each. Many times its reports have put EIA in the middle of major political controversies. EIA is located within the Department of Energy and is ultimately responsible to the Secretary of Energy. The Administrator is a presidential appointee serving at the president's "will and pleasure". At the same time Congress controls EIA's budget, which is considered separately from that of the DOE. Congress has maintained a special interest in EIA's independence.

The Committee has rarely been directly concerned with EIA's independence spending only about 1 percent of its sessions specifically on the topic. But it has come up during each presidential period and EIA administrators have often referred to EIA's need for independence in their remarks to the Committee. With the coming of the Reagan Administration, with its antipathy to the DOE, the Committee heard a report which evaluated the situation and outlined the potential threats to EIA.[77] The Committee has been deeply involved with EIA when EIA's work has had political ramifications that could have undermined its independence.

For example, the spikes in heating oil prices during the winter of 1989-90 led to EIA issuing a report indicating that price gouging was unlikely and the spikes were due primarily to the restricted supply and the anticipated market reaction.[78] That was rapidly followed by a report on the rise in petroleum prices that accompanied the invasion of Kuwait[79] indicating that market forces were again the culprits in the run up of fuel prices. These reports led to extensive Committee review during the spring 1991 meeting. [80]

In more recent years EIA has not shied away from the controversy surrounding the Kyoto Treaty and its potential impact on the U.S. economy.[81] During the spring 1998 meeting the Committee spent half a day reviewing EIA's reports and providing input for future

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[76] Senate Committee on Governmental Affairs, Energy Information Workshop on Current Progress and Problems, 96th Congress, 2nd Session, (1980).
[77] Dwyer, Bruce "EIA's Changing Role in Light of New Directions" ASA Committee on Energy Statistics, February 12, 1982.
[78] EIA, *An Analysis of Heating Fuel Market Behavior, 1989-1990* (Washington DC 1990)
[79] EIA, *Petroleum Prices and Profits in the 90 Days Following the Invasion of Kuwait,* (Washington DC 1990)
[80] Shirkey, Chuck "Combining Data from Various Sources", Weir, Paula "New Data Needs for Petroleum Marketing" and Rice, Morris "Winter Fuels Report" *Responding to Emergencies: Heating Oil Crisis of Last Winter and Situation in the Gulf,* ASA Committee on Energy Statistics, March 14, 1991.
[81] EIA, *Impacts of the Kyoto Protocol on U.S. Energy Markets and Economic Activity,*SR/OIAF/98-03 (1998)

work on this politically "hot" topic.[82] The involvement with the Committee continued into the fall meeting with additional reports and discussion[83].

The result of this interaction has been EIA's inclusion in their *Annual Energy Outlook* projections of energy related carbon emissions through 2020. International estimates are included in the *International Energy Outlook.* Both of these are annual publications. Greenhouse gas emissions are published each year in *Emission of Greenhouse Gases in the United States* and a further report on mitigating *Greenhouse Gas Emissions: Voluntary Reporting* is also published each year.

Despite the sensitive nature of these reports, EIA's independence does not appear to have been a major issue in recent years. The scrutiny which EIA's work received from the Committee has helped to fortify EIA's claim of not taking, ". . . positions on policy questions, while providing timely, high-quality information and to perform objective, credible analyses in support of the deliberations of both public and private decision makers"[84]. The widespread use of EIA reports and analysis further confirms that Congress, the administration, energy industries and the general public respect and appreciate the independence EIA has retained.

Timeliness versus Accuracy

The usefulness of energy information depends on its being available when needed by decision makers. It is common for either Congress or the Administration to expect quick turnaround of their requests for information. The need for speed may often conflict with the quality checks and reviews to which EIA seeks to subject its work. The need for accuracy in data collection has been discussed above. For some reports data may be as much as three months behind the publication date. EIA provides weekly data on fuels and prices which is subject to revision as the data becomes more complete[85].

On at least two occasions Congress was critical of EIA's ability to provide timely data during times of emergency. The first concerned the wide swing in oil prices during the period 1986-1988[86]. The second was during the record-breaking cold of winter l989-1990 when fuel prices skyrocketed[87]. The result of this Congressional prodding was extensive Committee involvement in the spring 1991 meeting on "Responding to

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[82] Andersen, Arthur and Rypinski, Arthur "Greenhouse Gas Emissions", Kydes, Andy and Early, Ron "Analysis of the Carbon Stabilization Cases in EIA's Service Report", Beamon, Alan "Analysis of Alternative Carbon, SO2 and NO2 and Renewable Cases" and Hakes, Jay "Future EIA Analyses Related to the Kyoto Agreement" ASA Committee on Energy Statistics, April 23, 1998.
[83] Hutzler, Mary "Handling High-Profile EIA Reports: A Case Study of the Greenhouse Gases Protocol Service", ASA Committee on Energy Statistics, November, 1998.
[84] EIA, *Kyoto Protocol* op. cit. preface.
[85] For a list of EIA periodicals and when issued see http://www.eia.doe.gov/publications.html
[86] *Hearing on EIA Domestic Oil Production Estimates",* Subcommittee on Energy and Power, House Committee on Energy and Commerce, 100th Congress, 1st Sess. (1987)
[87] *Hearings on Fuel Price Increases,* Subcommittee on Energy and Power, House Committee on Energy and Commerce. 101st Cong. 2nd Sess., (1990)

Emergencies: Heating Oil Crisis of Last Winter and Situation in the Gulf" [88] and a follow up roundtable at the fall meeting. The outcome was several changes in both weekly and monthly EIA publications and data series.

The Gulf War brought about EIA's issuance of the *Energy Situation Analysis Report (ESAR).* This was EIA's first attempt to provide real time data and information. [89] It was issued daily from August 2, 1990 to March 4, 1991 when the war ended. It was the direct result from the spike in crude oil prices and the public consternation which followed. Press reports, often based on fallacious or partial information, were feeding energy markets.[90] It sought to provide information for Congress and its staffs as well as people in the industry.

ESAR was a major change in EIA policy and procedures. EIA was forced to use data collected by others without complete verification. The daily report was not subjected to the same rigorous levels of review as other EIA publications. But ESAR does appear to have had the desired effect of providing information the public wants and Congress needs.

The second ESAR was issued in response to Y2K concerns at the turn of the century. It began in November of 1999 and continued through January of 2000. Motivation for the second ESAR was again press hype over possible problems with energy supply. Its primary focus was electric supply which appeared to be most vulnerable to interruption.

Since October of 2001 EIA has started bi-weekly distribution of ESAR. The uncertainties resulting from 9/11, the war in Afghanistan and the possibility of intervention in Iraq created a need for release of additional ESARs. Content is different from earlier editions with information on prices, demand and inventories complete with comments on latest developments. Each issue also contains coverage of a "special topic". A full Committee discussion on ESAR was held at the spring 2002 meeting[91] with the Committee providing suggestions for its improvement.

Evaluation of Committee Effectiveness

There are several ways to evaluate the Committee's effectiveness. One is that EIA has continued to fund the Committee during EIA's periods of declining federal appropriations. This would not have happened if EIA's Administrators had not attached a high value on the Committee's input. Committee attendance has always been high with

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[88] Shirkey, Chuck "Combining Data from Various Sources", Paula Weir, "New Data Needs for Petroleum Marketing", Rice, Morris "Winter Fuels Report-Propane Supply Data", ASA Committee on Energy Statistics, March 14, 1991.

[89] Kent, Calvin, "Energy Situation Analysis Report (ESAR): An Evaluation with Suggestions", ASA Committee on Energy Statistics, March 22, 2002.

[90] Kent, Calvin and Rodekohn, Mark, "The Role of Government Information during Periods of National Crisis: The Energy Information Administration and the Persian Gulf War", Government Information Quarterly, 9(1992), 11-33.

[91] Feld, Lowell "Energy Situation Analysis Report", ASA Committee on Energy Statistics, March 22, 2002.

almost all committee members participating as discussants showing that committee members valued their work.

A survey was sent during the summer of 2002 to all current and former Committee members. The same survey went to all past EIA Administrators, Deputy Administrators and Committee Liaisons. The purpose was to collect their impressions of the Committee's work and provide suggestions for improvement. From an original list of 103 names, 40 usable names with addresses were compiled. Twenty responded (13 Committee, 7 EIA) for a response rate of 50%. A follow up survey was sent to non-respondents in February 2003 at the request of the Committee. A total of 51 surveys were sent vial mail/e-mail from the first and second mailings combined. From the two mailings a total of twenty seven responded (16, Committee 11, EIA) for a response rate of 53%.

All were asked to respond to seven statements using a scale of 5 strongly agree, 4 agree, 3 neutral, 2 disagree and 1 strongly disagree. The seven statements were:

1. Overall the committee was effective in assisting EIA with its products, practices and policies.
2. The topics discussed by the Committee were relevant and timely to EIA's work.
3. EIA officials and staff were active participants in the Committee's work and supportive of the Committee's activities.
4. EIA officials and staff communicated with the Committee regarding issues discussed by the Committee and provide the Committee with sufficient feedback on how Committee recommendations were used.
5. The Composition of the Committee (membership) was appropriate for the mission of the Committee.
6. The structure of the Committee and the Committee meetings was appropriate and permitted the Committee to work effectively.
7. The quality of presentation by EIA staff was high and valuable to the Committee.

In addition the respondents were asked to elaborate on their answers. Also, they were asked to "provide specific examples of where the Committee's work was effective in influencing EIA practices, products and policies" and "what determined the effectiveness of the Committee in influencing EIA practices, products and policies". Table III tabulates the results of the survey.

INSERT TABLE III

There was virtually unanimous support from both Committee and EIA respondents on the effectiveness of the Committee. Respondents saw the Committee as "essential" and offering "great technical expertise". They also commented that the Committee had forced EIA to look at the "bigger issues" and was most effective in "scoping out items that might have large effects in future years". There was also strong support for the relevancy

of the topics to EIA's work with one past administrator noting he could "always bring the hard issues to them".

While still supportive of the Committee there was some hesitancy regarding EIA staff's participation and support of the Committee's activities. There was an indication from more than one EIA respondent that EIA upper management had not been consistent in its support of committee work. This varied with Administrators. There were some that felt the support was not broad based in EIA and other's feeling that materials were not disseminated in a timely enough fashion. This last comment is supported by the results concerning how effective communications with the Committee was. Some felt that "EIA did not provide sufficient feedback" on Committee recommendations, but even these critics noted improvement in recent years. There is a slight disconnect on these two issues between the Committee and EIA. Some respondents felt there was tension between the Committee and EIA who saw the Committee as confrontational.

The composition of the Committee was judged appropriate by both Committee and EIA respondents. The Committee has consisted primarily of academicians and those in "think tanks". One respondent noted "a good mix of three different backgrounds-economists, statisticians and survey experts." Some respondents wanted to see more industry based people on the Committee or individuals with knowledge or energy expertise. This was an often repeated comment.

The structure of the meetings was found to be satisfactory by the respondents with some negative feelings. Most replies mentioned the recent use of "breakout sessions" as a positive allowing more topics to be covered and for Committee members to go where their greatest expertise was needed. There was some discomfort with the formality of the meetings as dictated by the Advisory Committee Act. The suggestion was repeated that EIA needs to get the material for the Committee out in a more timely fashion.

Since 1990 EIA has put increasing emphasis on improving the presentations for the Committee. The positive results are confirmed by the respondent's replies. During the early years written presentations were generally brief and often cursory. Now written presentations are comparable to those at professional meetings. Oral presentations are rehearsed prior to the meeting and critiqued by EIA staff. Many respondents would agree with the assessment, "Presentations are definitely variable in quality" a "mixed bag". There was a feeling expressed by some that these offices in EIA most needing help were reluctant to expose themselves to Committee review.

When asked for specific examples of where the Committee had influenced EIA work, respondents gave the following replies: sampling techniques, data definitions, web products, confidentiality, modeling (particularly NEMS), graphics, data quality, data definitions, documentation, estimation of coal reserves, survey design, reclassification electric power data, Weekly Petroleum Statistical Report, crude oil production estimates, oil and gas reserves, natural gas marketing, CBECS & RECS, interruptible natural gas survey, model based sampling, performance measures and publication policy. One EIA

respondent commented, “The major value of this Committee is that it serves as an oversight council”.

In responding to the questions concerning what determined the effectiveness of the Committee, several replies included the rapport that developed between Committee members and EIA staff which lead to, “direct contact and further discussion” after the meeting. EIA’s adoption of Committee recommendations encouraged the members “to remain involved and attend Committee meetings”. A consistent reply was that the committee’s effectiveness was determined by the attitude of the Administrator and office directors toward the value of the Committee.

Conclusions

This review of over two decades of work with EIA by the Committee indicates the Committee has fulfilled its responsibilities under the Advisory Committee Act. It has been involved in all aspects of EIA’s work. Its suggestions and input have had impact on EIA’s policies, products and procedures. The Committee membership of well known and highly respected economists, statisticians and surveyors has given EIA an extremely low cost pool of expertise which EIA has not been reluctant to use. If EIA had gone to the market for the talents of this group, the cost would have been prohibitive. Both Committee members and EIA staff give generally high marks to Committee accomplishments.

EIA should make ever effort to place materials in the hands of the Committee well before the Committee meetings. This would improve the quality of respondent’s comments and place less pressure on Committee members. Efforts to improve the quality of both written and oral presentations should continue with more attention being paid to consistent high quality. Both of these suggestions would contribute to an even more exemplary partnership.

Table III
Responses to Questionnaire
ASA Committee on Energy Statistics

Response	Committee Effectiveness			Topic Relevancy			EIA Support			Communication Feedback			Committee Composition			Meeting Structure			Presentation Quality		
	Total	**Member**	**EIA**	**Total**	**Member**	**EIA**	**Total**	**Member**	**EIA**	**Total**	**Member**	**EIA**	**Total**	**Member**	**EIA**	**Total**	**Member**	**EIA**	**Total**	**Member**	**EIA**
Strongly Agree	9	4	5	11	5	6	14	10	4	7	4	3	11	5	6	11	8	3	6	4	2
Agree	16	10	6	12	8	4	8	3	5	12	8	4	14	9	5	9	3	6	18	10	8
Neutral	1	1	0	3	2	1	3	2	1	4	2	2	2	2	0	3	3	0	3	2	1
Disagree	1	1	0	0	0	0	2	1	1	3	2	1	0	0	0	2	0	2	0	0	0
Strongly Disagree	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0